

# **THE BOARD OF REGISTRATION FOR GEOLOGISTS AND GEOPHYSICISTS**

## **JOINT LEGISLATIVE SUNSET REVIEW COMMITTEE 2000 SUNSET REVIEW REPORT**

---

*Four Year Overview of the Board's Regulatory Program, Board's Response to Issues and Recommendations from Prior 1996/97 Sunset Review, Background Paper for the 1999 Public Hearing, Board's Response to Issues and Recommendations from 1999/2000 Sunset Review, and Final Recommendations of the Joint Committee and the Department of Consumer Affairs*

---

**Senator Liz Figueroa**  
Chair

**Senate Members**  
Maurice Johannessen  
Richard Polanco

**Assembly Members**  
Elaine Alquist  
Mike Honda

**Staff:**  
Bill Gage, Senior Consultant

**Staff Assistance Provided By:**  
Mark Rakich, Chief Counsel  
Senate Business and Professions Committee

Jay DeFuria, Principal Consultant  
Senate Business and Professions Committee

Sailaja Cherukuri, Former Principal Consultant  
Senate Business and Professions Committee

# TABLE OF CONTENTS

<b>PART 1. BACKGROUND INFORMATION AND FOUR YEAR OVERVIEW OF THE CURRENT REGULATORY PROGRAM .....</b>	<b>1</b>
<b>Background and Description of the Board and Profession.....</b>	<b>1</b>
History and Function of the Board.....	1
Legal History .....	2
Current Composition of the Board.....	3
Regulation .....	3
Major Changes Since Sunset Review I.....	4
Licensing Data .....	6
<b>Budget and Staff.....</b>	<b>7</b>
Current Fee Schedule and Range.....	7
Revenue and Expenditure History .....	8
Expenditures by Program Component.....	8
Fund Condition .....	8
<b>Licensure Requirements.....</b>	<b>10</b>
Education, Experience and Examination Requirements .....	10
Examinations.....	11
Time to Process Applications, Provide Exam and Issue License .....	11
Continuing Education/Competency Requirements.....	12
Comity/Reciprocity with Other States .....	12
<b>Enforcement Activity.....</b>	<b>13</b>
Enforcement Program Overview .....	14
Case Aging Data .....	15
Cite and Fine Program .....	16
Results of Complainant Survey .....	16
<b>Enforcement Expenditures and Cost Recovery .....</b>	<b>18</b>
Average Costs of Disciplinary Cases.....	18
Cost Recovery Efforts.....	18
<b>Restitution Provided to Consumers .....</b>	<b>19</b>
<b>Complaint Disclosure Policy .....</b>	<b>19</b>
Introduction.....	19
Information to be Released .....	19
Closed Actionable Complaints .....	19
Open Complaints .....	20

<b>Consumer Outreach and Education.....</b>	<b>21</b>
<b>PART 2. BOARD’S RESPONSE TO IDENTIFIED ISSUES AND RECOMMENDATIONS FROM PRIOR 1996/97 REVIEW .....</b>	<b>22</b>
Issue 1     Should the Board continue as a separate entity, be merged with another board, or sunsetted and its role taken over by the Department of Consumer Affairs? .....	22
Issue 2     What changes can be made to the current regulatory program to improve its overall effectiveness and efficiency so that it may operate more in the public interest? .....	22
Issue 3     Should the State continue with the licensing and regulation of geologists and geophysicists and, if not, should some other alternative form of regulation be recommended? .....	27
<b>PART 3. BACKGROUND PAPER FOR 1999 PUBLIC HEARING .....</b>	<b>31</b>
<b>PART 4. BOARD’S RESPONSE TO ISSUES AND RECOMMENDATIONS FROM 1999/2000 SUNSET REVIEW .....</b>	<b>37</b>
<b>PART 5. FINAL RECOMMENDATIONS OF THE JOINT LEGISLATIVE SUNSET REVIEW COMMITTEE AND THE DEPARTMENT OF CONSUMER AFFAIRS.....</b>	<b>47</b>

## **PART 1.**

### **Board of Registration For Geologists And Geophysicists**

#### **BACKGROUND INFORMATION AND FOUR YEAR OVERVIEW OF THE CURRENT REGULATORY PROGRAM**

#### **BACKGROUND AND DESCRIPTION OF THE BOARD AND PROFESSION**

##### **History and Function of the Board**

During the very heavy rainfall in the winter of 1951-52, several devastating landslides occurred in Southern California, particularly in the City of Los Angeles. In the interest of protecting people from harm and reducing losses from landslides in their communities, the City of Los Angeles, Los Angeles County, and later several other cities and counties enacted ordinances requiring geological investigations prior to hillside development. The results of these investigations were used to mitigate the hazard from landslides.

These municipalities recognized that it was necessary to determine the qualifications of geologists proposing to perform these investigations in their communities. To achieve this objective, the City of Los Angeles and Los Angeles County established qualifications panels that evaluated the qualifications of individual geologists and determined whether or not they could practice geology in that particular city or county. Eventually there were 20 or more local geologist qualification boards in California. This system resulted in individuals needing eight or ten “approvals” in order to do work in their general area. This was an excessively burdensome system upon the consulting geologists and expensive for each city or county, not to mention the lack of uniformity in application among these different panels. Geologists had generally opposed a licensing law, preferring to be fully independent. Nonetheless, that was not possible under this system of licensing by individual cities and counties.

By 1966 both the City and the County of Los Angeles had become tired of being in the geologist registration business and were going to work toward a statewide geologist regulation bill in 1967. Mayor Sam Yorty appointed a “Committee on the Geological Environment in the City of Los Angeles” that recommended that the city’s 1967 legislative program encourage introduction of a bill to regulate the practice of geology. There were various versions of the bill. In 1968, with the support of the American Association of Petroleum Geologists, The American Institute

of Professional Geologists, the San Joaquin Geological Society, and the Association of Engineering Geologists, a license act was passed.

### **Legal History**

The State Board of Registration for Geologists and Geophysicists (hereinafter referred to as the “Board”) was created in 1969 by legislation enacted in 1968 [the Geologist Act (Stats. 1968, ch. 942, sec. 3)], and was provided authority to regulate the practice of geology. Legislative intent articulated in Section 1 of the Statutes of 1968, chapter 942, provided:

“This chapter is enacted in order to introduce qualifying criteria in a presently unregulated professional field. Such action recommends itself through benefits to the safety, health, and property of the people of California and to the promotion of the public welfare. These benefits are in the fields of geology as related to engineering, groundwater, mineral exploration, and development of the science of geology, and other geologic matters of concern to the people of the state.”

Legislation enacted in 1972 extended the Board’s jurisdiction to include geophysicists, and the name of the enabling act was amended to the Geologist and Geophysicist Act (Stats. 1972, ch.1396, sec. 4, hereinafter referred to as the “Act”). The Act restricts the practice of geology and geophysics offered or performed for “others in this state” and restricts the use of certain titles. Unlicensed activity is a misdemeanor offense punishable by a fine of not more than one thousand dollars or by imprisonment not to exceed three months, or by both fine and imprisonment. Although the Board may investigate unlicensed activity, criminal prosecution of individuals must be referred to local law enforcement officials.

The Board is granted discretionary authority to adopt regulations to carry out its statutory mandate, and to provide for certification of registration into different specialties. Currently, by regulation the Board licenses individuals in the specialties of Certified Engineering Geology and Certified Hydrogeology (Title 16, Cal. Code of Regs., sec. 3041 and 3042). In addition to its rule-making powers, the Board has adjudicatory authority over complaints against licensees and may discipline individuals for certain acts in violation of law on a majority vote. The Board may also appoint advisory committees, composed of its public members and persons registered under its law. Finally, the Board has authority to establish relations with similar regulatory agencies established in other states and foreign countries.

The Board is responsible for licensing geologists and geophysicists who meet certain education, experience and written examination requirements. The Board issues licenses to qualified individuals. The Board may issue a license as a Registered Geologist or Registered Geophysicist to any person, provided that the individual’s qualifications meet all other requirements established by the Board.

Pursuant to the California Administrative Procedures Act (Gov. Code, sec. 11340 et seq.), the Board has adopted regulations establishing its organizational structure, delegation of authority, schedule of registration fees, application procedures, examination procedures, criteria for certification specialties, standards for license discipline and a Code of Professional Standards. The Board’s regulations are found in Division 29, Title 16 of the California Code of Regulations.

### **Current Composition of the Board**

The Board of Registration for Geologists and Geophysicists consists of seven members, four of whom are public members, two of whom are geologists, and one of whom is a geophysicist. The two Registered Geologists are a Registered Geologist specializing in petroleum geologist and a Certified Engineering Geologist. The Governor appoints two of the public members and the three professional members of the Board. The Senate Rules Committee and the Speaker of the Assembly each appoint one public member of the Board.

The qualifications for Board membership are mandated in Section 7811 of the Act. Each Board member shall be a citizen of the United States, shall be at least 30 years of age, and shall have been a resident of California for at least five years immediately preceding his or her appointment. The three professional members of the Board shall be licensed under the provisions of the Geologist and Geophysicist Act. As noted earlier, one shall be a Registered Geophysicist, one a Certified Engineering Geologist, and one a Registered Geologist practicing in the area of petroleum geology.

#### **The Board members are as follows:**

**Sharon Jasek Reid, President**

(Public Member)

**David Cummings, Vice-President**

(Professional Member)

**Dorene Dominguez**

(Public Member)

**Seena N. Hoose**

(Professional Member)

**Robert Lindblom**

(Professional Member)

**Karen Melikian**

(Public Member)

**Vacant**

(Public Member)

*Appointing Authority:* Senate Rules Committee

*Term Expiration:* 6/1/03

*Appointing Authority:* Governor

*Term Expiration:* 6/1/01

*Appointing Authority:* Governor

*Term Expiration:* 6/1/02

*Appointing Authority:* Governor

*Term Expiration:* 6/1/01

*Appointing Authority:* Governor

*Term Expiration:* 6/1/99

*Appointing Authority:* Governor

*Term Expiration:* 6/1/02

*Appointing Authority:* Speaker of the Assembly

*Term Expiration:* 6/1/99

### **Regulation**

The Board of Registration for Geologists and Geophysicists licenses and regulates the professions of geology and geophysics, as practiced before the public. This practice regulation includes all specialties and sub-specialties of geology and geophysics including engineering geology and hydrogeology.

## **Major Changes Since Sunset Review I**

### **Board Reconstitution**

The Board was reduced from eight members to seven members.

### **National Examination**

Beginning in spring 2000, the Board will administer the ASBOG (National Association of State Boards of Geology) examination for licensure as a Registered Geologist.

### **Staff**

The Board hired a new Executive Officer, Enforcement Coordinator and Examination Coordinator. The Enforcement Coordinator position was established in Fiscal Year 1997/98.

### **Adoption of Policies and Procedures Manual**

The Board adopted a Policies and Procedures Manual to improve the processes by which staff implements the Board's policy and direction.

### **Public Outreach**

The Board continued its goal to provide information to consumers, government agencies and academia by:

- Presenting information to over 500 geologists at the Geological Society of America's Cordilleran Section conference.
- Conducting 5 outreach presentations to college and university students in a continued effort to develop a dialogue with the academic community about licensure.
- Developing the *Student Guide to Geologic Licensure in California* and the *Student Guide to Geophysical Licensure in California* to inform students about the examination and licensure process.
- Holding public information forums in northern and southern California on the proposed revisions to the Geologist and Geophysicist Act.

## **Adoption of Strategic Plan**

The Board adopted a Strategic Plan in June 1997. The Plan was updated in June 1998 and April 1999. This fulfills the Board's commitment to annually revise its Strategic Plan. Since the plan is a living document that guides the Board in administering its statutory and regulatory mandates, it will be revised annually.

## **Regulatory Actions**

The Board adopted/amended regulations to:

- Replace the 70% pass rate for examinations with a psychometrically recognized, criterion-referenced pass point method.
- Establish in regulation the Board's Disciplinary Guidelines.
- Expand the criteria for determining rehabilitation to apply also to determining appropriate discipline.
- Designate the National Association of State Boards of Geology (ASBOG) examination as the approved national examination for licensure as a Registered Geologist.
- Increase fees to implement administration of the ASBOG examination and to recover costs for processing examination applications.
- Establish a Code of Professional Standards.

## Licensing Data

There are 6,548 licensed Registered Geologists, Registered Geophysicists, Certified Engineering Geologists and Certified Hydrogeologists licensed by the Board for Fiscal Year 1998/99. The following provides licensing data for the past four years:

LICENSING DATA FOR Registered Geologists	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99
<b>Total Licensed</b> (Combined – statistics are not maintained by California and out-of-state)	Total: 4,150	Total: 4,116	Total: 4,158	Total: 4,147
<b>Applications Received</b>	Total: 656	Total: 494	Total: 431	Total: 411
<b>Applications Denied</b>	Total: 7	Total: 0	Total: 10	Total: 4
<b>Licenses Issued</b>	Total: 317	Total: 149	Total: 137	Total: 96
<b>Renewals Issued</b>	Total: 1,770	Total: 1,944	Total: 1,933	Total: 2,025
<b>Statement of Issues Filed</b>	Total: 0	Total: 0	Total: 0	Total: 0
<b>Statement of Issues Withdrawn</b>	Total: 0	Total: 0	Total: 0	Total: 0
<b>Licenses Denied</b>	Total: 0	Total: 0	Total: 0	Total: 0
<b>Licenses Granted</b>	Total: 0	Total: 0	Total: 0	Total: 0

OTHER LICENSURE CATEGORIES (If Applicable)	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99
<b>Total Licensees (By Type)</b>	Total: 2,238	Total: 2,300	Total: 2,360	Total: 2,401
Registered Geophysicist	320	298	284	273
Engineering Geologist	1,456	1,469	1,488	1,506
Hydrogeologist	462	533	588	622
<b>Licenses Issued (By Type)</b>	Total: 524*	Total: 120	Total: 123	Total: 74
Registered Geophysicist	10	10	4	2
Engineering Geologist	56	44	47	37
Hydrogeologist	458*	66	72	35
<b>Renewals Issued (By Type)</b>	Total: 826	Total: 1,042	Total: 1,060	Total: 1,180
Registered Geophysicist	133	149	129	134
Engineering Geologist	693	678	719	719
Hydrogeologist	*	215	212	327

\*The first licensing examination for Certified Hydrogeologists was in March 1995. Therefore, there were a large number of Certified Hydrogeologist licenses issued in Fiscal Year 1995/96.

## BUDGET AND STAFF

### Current Fee Schedule and Range

The Board's primary sources of revenue are application and license fees. Each license is renewed biennially on the issuance anniversary.

Fee Schedule	Current Fee	Statutory Limit
<b>Application Fees</b>		
Registered Geologist	\$250	\$250
Registered Geologist (Temporary)	\$ 80	\$ 80
Registered Geophysicist	\$250	\$250
Registered Geophysicist (Temporary)	\$ 80	\$ 80
Certified Engineering Geologist	\$250	\$250
Certified Engineering Geologist (Temporary)	\$80	\$80
Certified Hydrogeologist	\$250	\$250
Certified Hydrogeologist (Temporary)	\$80	\$80
<b>Exam Fees</b>		
Registered Geologist – National and CA	\$300	\$300
Registered Geologist – CA specific	\$100	\$100
Registered Geophysicist	\$100	\$100
Certified Engineering Geologist	\$100	\$100
Certified Hydrogeologist	\$100	\$100
<b>Admin. Fee</b>		
Duplicate Certificate	\$ 6	\$ 6
<b>Original License Fees</b>		
Registered Geologist	Various*	Various*
Registered Geophysicist	Various*	Various*
Certified Engineering Geologist	Various*	Various*
Certified Hydrogeologist	Various*	Various*
<b>Renewal Fees</b>		
Registered Geologist	\$200	\$200
Delinquent Registered Geologist	\$300	\$300
Registered Geophysicist	\$200	\$200
Delinquent Registered Geophysicist	\$300	\$300
Certified Engineering Geologist	\$ 50	\$ 50
Delinquent Certified Engineering Geologist	\$ 75	\$ 75
Certified Hydrogeologist	\$ 50	\$ 50
Delinquent Certified Hydrogeologist	\$ 75	\$ 75

\*Proration of license fee based on date of examination and other factors.

## Revenue and Expenditure History

REVENUES	ACTUAL				PROJECTED	
	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
Licensing Fees	\$616,209.	\$603,976.	\$548,506.	\$591,169.	\$832,455.	\$896,935.
Fines & Penalties	- 0 -	\$ 2,250.	- 0 -	\$ 8,000.	\$ 10,000.	\$ 12,000.
Other	\$ 337.	\$ 36,262.*	\$ 176.	\$113,636.**	\$	\$ 36,000.***
Interest	\$ 44,204.	\$ 41,989.	\$ 43,411.	\$ 38,830.	\$ 38,148.	\$ 29,710.
<b>TOTALS</b>	<b>\$660,750.</b>	<b>\$684,477.</b>	<b>\$592,093.</b>	<b>\$751,635.</b>	<b>\$ 880,603.</b>	<b>\$974,645.</b>
EXPENDITURES	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
Personnel Services	\$318,007.	\$322,419.	\$312,144.	\$341,413	\$ 378,847.	\$ 451,408.
Operating Expenses	\$389,956.	\$259,724.	\$310,697.	\$439,814.	\$ 670,515.	\$ 752,136.
(-) Reimbursements		\$ 2,000.	\$ 4,600.	2,470.		
(-) Distributed Costs						
<b>TOTALS</b>	<b>\$707,963.</b>	<b>\$580,143.</b>	<b>\$618,241.</b>	<b>\$778,757.</b>	<b>\$1,049,393.</b>	<b>\$1,203,544.</b>

\*Includes \$35,951 General Fund transfer (Malibu)

\*\*Includes \$112,971 General Fund transfer (Malibu)

\*\*\*General Fund transfer (Malibu)

## Expenditures by Program Component

EXPENDITURES BY PROGRAM COMPONENT *	FY 95-96	FY 96-97	FY 97-98	FY 98-99	Average % Spent by Program
Enforcement	\$273,534	\$153,310	\$158,319	\$212,249	30%
Examination	\$209,645	\$198,354	\$211,079	\$276,428	33%
Licensing	\$95,796	\$94,754	\$106,757	\$129,445	16%
Administrative	\$128,988	\$135,725	\$146,686	\$163,105	21%
Diversion (If Apply)					
<b>TOTALS</b>	<b>\$707,968</b>	<b>\$582,143</b>	<b>\$622,841</b>	<b>\$781,227</b>	

## Fund Condition

For Fiscal Year 1999/00, the Board maintains a 6.8-month reserve. No deficit is anticipated at this time. The Board recently increased its application fees to the statutory maximum of \$250 and initiated examination fees. The following table represents the Board's fund condition:

<b>ANALYSIS OF FUND CONDITION</b>	<b>FY 97-98</b>	<b>FY 98-99</b>	<b>FY 99-00 (Budget Yr.)</b>	<b>FY 00-01 (Projected)</b>	<b>FY 01-02 (Projected)</b>	<b>FY 02-03 (Projected)</b>
<b>Total Reserves, July 1</b>	\$ 825,558.	\$ 794,684.	\$ 762,951.	\$ 594,193.	\$ 365,294.	\$ 325,181.
<b>Total Rev. &amp; Transfers</b>	\$ 592,093.	\$ 751,635.	\$ 880,603.	\$ 974,645.	\$ 972,646.	\$1,018,359.
<b>Total Resources*</b>	\$1,417,525.	\$1,544,228.	\$1,643,553.	\$1,568,838.	\$1,337,939.	\$1,343,541.
<b>Total Expenditures</b>	\$ 622,841.	\$ 781,227.	\$1,049,360.	\$1,203,544.	\$1,012,758.	\$1,012,758.
<b>Reserve, June 30</b>	\$ 794,684.	\$ 762,951.	\$ 594,193.	\$ 365,294.	\$ 325,181.	\$ 330,783.
<b>MONTHS IN RESERVE</b>	<b>12.3</b>	<b>11.7</b>	<b>6.8</b>	<b>3.6</b>	<b>3.0</b>	<b>3.9</b>

\* Figures are rounded.

## LICENSURE REQUIREMENTS

### Education, Experience and Examination Requirements

The experience requirement for admission to the Registered Geologist examination is as follows:

<b>EDUCATION</b>	<b>PROFESSIONAL GEOLOGICAL/GEOPHYSICAL WORK</b>
<b>No Degree</b>	<b>7 Years</b>
<b>BS/BA</b>	<b>5 Years</b>
<b>MS/MA+</b>	<b>3 Years</b>

Professional geological or geophysical work experience must be gained under the immediate supervision of a Registered Geologist or a Registered Civil Engineer or a petroleum engineer for geologists and a Registered Geophysicist for a geophysicist. For admission to the examination for Certified Engineering Geologist, the individual must be licensed in California as a Registered Geologist and have experience under the direct supervision of a Certified Engineering Geologist or under a Registered Civil Engineer. For admission to the examination for Certified Hydrogeologist, the individual must be licensed in California as a Registered Geologist and have either: five years of experience in hydrogeology under the direct supervision of a Registered Geologist or Certified Engineering Geologist who also has at least five years experience in hydrogeologic work, or three years of hydrogeology experience under the direct supervision of a Certified Hydrogeologist.

An applicant for examinations to become licensed as a Registered Geologist or a Registered Geophysicist must submit the appropriate application with applicable transcripts, experience verifications and fee. An applicant for examinations to become licensed as a Certified Engineering Geologist or Certified Hydrogeologist must submit the appropriate application with experience verifications and fees.

The Board has contracted with the Office of Examination Resources within the Department of Consumer Affairs to prepare examination validation studies for its licenses. The Certified Hydrogeologist occupational analysis was completed in late summer of 1999; and the Certified Engineering Geologist occupational analysis is currently underway, with a scheduled completion date of spring 2000. The Registered Geologist occupational analysis will be conducted by the Office of Examination Resources beginning in spring 2000, and the Registered Geophysicists analysis will be performed beginning in summer 2000.

The adoption of a national examination allows the Board to utilize ASBOG's experience in test validation. The task analysis performed by ASBOG results in the development of test blueprints that isolate those professional activities that impact public protection. The test blueprints determine the content of the examinations until they are updated with the results of the new task analyses done approximately every five years.

## **Examinations**

The Board will administer the National Association of State Boards of Geology (ASBOG) examination for licensure as a Registered Geologist for the first time in spring of 2000. Therefore, there is no data to compare California's pass rate for the ASBOG examination and the rest of the nation. The pass rate for the ASBOG examination is approximately 60%.

**The following represents pass rates for the current California examinations:**

<b>CALIFORNIA EXAMINATIONS</b>				
	<b>1995/96</b>	<b>1996/97</b>	<b>1997/98</b>	<b>1998/99</b>
<b>CANDIDATES</b>				
Registered Geologist	587	470	387	336
Registered Geophysicist	11	8	6	4
Certified Engineering Geologist	130	125	80	71
Certified Hydrogeologist	326	149	86	79
<b>PASS %</b>				
Registered Geologist	33.6%	22.6%	33.9%	28%
Registered Geophysicist	36.4%	75%	66.7%	100%
Certified Engineering Geologist	19.2%	35.2%	56.3%	56.3%
Certified Hydrogeologist	66.3%	45.6%	82.5%	40.5%

## **Time to Process Applications, Provide Exam and Issue License**

The following are the minimum, median and maximum processing times for an application from the time of receipt of the completed application until the Board makes a decision regarding (1) a candidates eligibility to take an examination and (2) written examination results:

### **Application to Examination**

Minimum	41 days
Median	113 days
Maximum	239 days

### **Application to Examination Results**

Minimum	175 days
Median	202 days
Maximum	236 days

In Fiscal Year 1997/98, the Board met and exceeded the goal to notify 50% of the applicants of their eligibility to take an examination within 41 days of completion of the application package and to notify 75% of the applicants of written examination results within 175 days of completion of the application package. In Fiscal Year 1998/99, the Strategic Plan was amended. The new goals to notify 75% of the applicants of their eligibility to take an examination within 41 days of completion of the application package and to notify 100% of the applicants of written examination results within 100 days of the completion of the application package were met and exceeded.

### **Continuing Education/Competency Requirements**

The Board has no continuing education requirements.

### **Comity/Reciprocity With Other States**

At its February 21-22, 1998, meeting, the Board voted to enter into agreements with other states for mutual recognition of licensure by comity. The Board sent letters to all states that administer the ASBOG (National Association of State Boards of Geology) Examination for licensure as a Registered Geologist. The letter detailed the following criteria for licensure by comity in California:

- The applicant passes the ASBOG examination on or after fall 1996.
- The applicant passes a one-hour supplemental California examination.
- The applicant meets California's minimum experience and education requirements.
- The applicant is in good standing with the state in which he or she is licensed.

The Board currently has a comity agreement with the state of Idaho. The following states responded to the Board's request for mutual license recognition and will consider granting licensure to an applicant from California if they meet the requirements for licensure in that state:

Georgia  
Kentucky  
North Carolina  
Oregon  
Pennsylvania  
Puerto Rico

The Board is continually developing agreements or understandings of mutual license recognition and will continue to develop agreements with all states that administer the ASBOG examination.

## ENFORCEMENT ACTIVITY

ENFORCEMENT DATA	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99
<b>Inquiries</b>	Total: Not Recorded	Total: Not Recorded	Total: Not Recorded	Total: Not Recorded
<b>Complaints Received (Source)</b>	Total: 17	Total: 24	Total: 24	Total: 41
Public	4	6	10	14
Licensee/Professional Groups	9	13	7	15
Governmental Agencies	1	1	1	5
Other	3	4	6	7
<b>Complaints Filed (By Type)*</b>	Total: *	Total: *	Total: *	Total: *
Competence/Negligence				
Unprofessional Conduct				
Fraud				
Health & Safety				
Unlicensed Activity				
Personal Conduct				
<b>Complaints Closed</b>	Total: 12	Total: 18	Total: 20	Total: 29
<b>Investigations Commenced</b>	Total: 3	Total: 2	Total: 5	Total: 9
<b>Compliance Actions</b>	Total: 4	Total: 2	Total: 1	Total: 7
ISOs & TROs Issued				
Citations and Fines		1	1	6
Public Letter of Reprimand		1		
Cease & Desist/Warning				
Referred for Diversion	4			1
Compel Examination				
<b>Referred for Criminal Action</b>	Total: 0	Total: 0	Total: 0	Total: 0
<b>Referred to AG's Office</b>	Total: 1	Total: 0	Total: 0	Total: 3
Accusations Filed				1
Accusations Withdrawn				
Accusations Dismissed	1			
<b>Stipulated Settlements</b>	Total: 1	Total: 0	Total: 0	Total: 0
<b>Disciplinary Actions</b>	Total: 1	Total: 0	Total: 0	Total: 0
Revocation				
Voluntary Surrender				
Suspension Only				
Probation with Suspension	1			
Probation				
Probationary License Issued				
<b>Probation Violations</b>	Total:	Total: 0	Total: 0	Total: 0
Suspension or Probation				
Revocation or Surrender				

\*This information was being compiled at the time of printing. Information is available upon request.

## **Enforcement Program Overview**

The number of complaints received increased in the past year. Complaints from consumers and licensees constituted seventy percent of the complaints submitted in the past fiscal year. Complaints were evenly split between these two groups. In the past, licensees and professionals generally submitted the majority of complaints. The number of complaints submitted by government agencies has increased as well. Although local officials and licensees are not required to report violations to the Board, the number of these complaints is increasing. This is probably due to several factors including increased enforcement activity in the past year; outreach efforts and publicizing closed enforcement cases.

The majority of complaints are related to competence/negligence. There also have been increased cases related to unlicensed practice. The number of cases referred to the Division of Investigation and the Board's technical experts increased over the fiscal year. The enforcement staff initially reviews the complaint and identifies if the information submitted is adequate to evaluate the case. The Associate Engineering Geologist evaluates the technical aspects of the case and requests or obtains additional information if needed. The Associate Engineering Geologist also determines if the case should be forwarded to a technical expert for evaluation. The technical expert is selected based on the following criteria: type of case, the expert's area of expertise (for example, fault evaluation, groundwater investigations, slope stability analysis, etc.), absence of conflict of interest, availability of the expert, geographic location of the case (if relevant) and facts of the case. The Division of Investigation was involved in 13 cases over the past fiscal year, triple the number in Fiscal Year 97/98. Eight technical experts worked on 15 different cases in the past fiscal year. Most of these cases are still active and final disciplinary action is not known. If the case warrants disciplinary action, the cases will result in an accusation or citation and fine, depending on the disciplinary history of the respondent, severity of the violation and potential threat to life and property.

<b>NUMBER OF COMPLAINTS DISMISSED, REFERRED FOR INVESTIGATION, TO ACCUSATION AND FOR DISCIPLINARY ACTION</b>				
	<b>FY 1995/96</b>	<b>FY 1996/97</b>	<b>FY 1997/98</b>	<b>FY 1998/99</b>
<b>COMPLAINTS RECEIVED</b>	<b>17</b>	<b>24</b>	<b>24</b>	<b>41</b>
Complaints Closed	12	24	20	29
Referred for Investigation	0	2	5	9
Accusation Filed	0	0	0	1
Disciplinary Action	1	1	1	6

## Case Aging Data

The time frames for processing complaints, investigating cases and filing formal charges varies depending on the complexity of the individual case. The enforcement program is a priority for the Board and the caseload increased in Fiscal Year 98/99 due to the emphasis on enforcement.

AVERAGE DAYS TO PROCESS COMPLAINTS, INVESTIGATE AND PROSECUTE CASES				
	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99
Complaint Processing	174	108	86	64
Investigations	102	13	72	85
Pre-Accusation*				
Post-Accusation**				
<b>TOTAL AVERAGE DAYS***</b>	<b>207</b>	<b>112</b>	<b>103</b>	<b>99</b>

\*From completed investigation to formal charges being filed.

\*\*From formal charges filed to conclusion of disciplinary case.

\*\*\*From date complaint received to date of final disposition of disciplinary case.

INVESTIGATIONS CLOSED WITHIN:	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	AVERAGE % CASES CLOSED
90 Days	1	7	9	11	36%
180 Days	4	8	7	8	35%
1 Year	5	3	4	10	28%
2 Years	1				1%
3 Years					
Over 3 Years					
<b>Total Cases Closed</b>	<b>11</b>	<b>18</b>	<b>20</b>	<b>29</b>	
AG CASES CLOSED WITHIN:	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	AVERAGE % CASES CLOSED
1 Year	1				
2 Years					
3 Years					
4 Years					
Over 4 Years					
<b>Total Cases Closed</b>	<b>1</b>				
<b>Disciplinary Cases Pending</b>				<b>4</b>	

### **Cite and Fine Program**

Regulations implementing citation and fine were adopted in December 1995. Six citations with fines were issued in Fiscal Year 98/99. In three of the cases, the respondents appealed the citations; and the cases were forwarded to the Attorney General Office for hearing. There are currently two citations pending appeal.

Citations and fines are generally issued in cases of licensees without prior disciplinary action and for unlicensed practice. In the case of citations issued to licensees, the violation must not be an immediate threat to life or property. In the case of unlicensed practice, jurisdiction for prosecution lies with the local district attorneys to prosecute the unlicensed practice cases. However, in most cases of unlicensed practice, unless the case has other related criminal violations, most local district attorneys do not have the resources available to prosecute unlicensed practice. Therefore, issuing citations and fines is the most effective method to make offenders aware of the Geology and Geophysicist Act, improve the standard of practice, as well as provide a means to promote licensure among qualified people that are practicing geology and geophysics but are not currently licensed.

<b>CITATIONS AND FINES</b>	<b>FY 1995/96</b>	<b>FY 1996/97</b>	<b>FY 1997/98</b>	<b>FY 1998/99</b>
Total Citations		<b>1</b>		
Total Citations With Fines			<b>1</b>	<b>6</b>
Amount Assessed			<b>\$500</b>	<b>\$15,000</b>
Reduced, Withdrawn, Dismissed				<b>\$2,500</b>
<b>Amount Collected</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$8,000</b>

### **Results of Complainant Survey**

The Board's improvements in policy, organization and practice since the JLSRC's report have not yet had a chance to statistically impact the number of consumers surveyed and the overall levels of satisfaction. Board staff made a diligent and thorough effort to contact **all** individuals who filed complaints with the Board alleging the improper practice of geology and geophysics. It is the Board's position that the consumer satisfaction survey indicates an increased level of satisfaction amongst consumers who filed a complaint with the Board within the last few years. This indicates the successful implementation of a strong enforcement program at the Board since the last Sunset Report.  
(See next page for results.)

## CONSUMER SATISFACTION SURVEY RESULTS\*

QUESTIONS	RESPONSES				
# Surveys Mailed: 102 # Surveys Returned: 51 (50%)	<i>SATISFIED</i>		<i>DISSATISFIED</i>		
	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
1. Were you satisfied with knowing where to file a complaint and whom to contact?	41 (89%)		5 (11%)		
2. When you initially contacted the Board, were you satisfied with the way you were treated and how your complaint was handled?	38 (78%)		11 (22%)		
3. Were you satisfied with the information and advice you received on the handling of your complaint and any further action the Board would take?	32 (67%)		16 (33%)		
4. Were you satisfied with the way the Board kept you informed about the status of your complaint?	28 (60%)		19 (40%)		
5. Were you satisfied with the time it took to process your complaint and to investigate, settle, or prosecute your case?	25 (57%)		19 (43%)		
6. Were you satisfied with the final outcome of your case?	17 (50%)		17 (50%)		
<b>7. Were you satisfied with the overall service provided by the Board?</b>	<b>43 (61%)</b>		<b>28 (39%)</b>		

\*The JLSRC directed all boards and committees under review this year, to conduct a consumer satisfaction survey to determine the public's views on certain case handling parameters. (The Department of Consumer Affairs currently performs a similar review for all of its bureaus.) The JLSRC supplied both a sample format and a list of seven questions, and indicated that a random sampling should be made of closed complaints for a four-year period. Consumers who filed complaints were asked to review the questions and respond to a 5-point grading scale (i.e., 5=satisfied to 1=dissatisfied).

## ENFORCEMENT EXPENDITURES AND COST RECOVERY

### Average Costs for Disciplinary Cases

<b>AVERAGE COST PER CASE INVESTIGATED</b>	<b>FY 1995/96</b>	<b>FY 1996/97</b>	<b>FY 1997/98</b>	<b>FY 1998/99</b>
Cost of Investigation & Experts	\$22,768	\$12,929	\$3,326	\$24,003
Number of Cases Closed	12	24	20	29
Average Cost Per Case	\$1,897	\$539	\$166	\$828
<b>AVERAGE COST PER CASE REFERRED TO AG</b>	<b>FY 1995/96</b>	<b>FY 1996/97</b>	<b>FY 1997/98</b>	<b>FY 1998/99</b>
Cost of Prosecution & Hearings	\$71,090	\$7,922	\$875	\$9,782
Number of Cases Referred	0	0	0	3
Average Cost Per Case*	\$23,697	\$7,922	\$875	\$3,261
<b>AVERAGE COST PER DISCIPLINARY CASE**</b>	<b>\$7,822</b>	<b>\$869</b>	<b>\$210</b>	<b>\$1,165</b>

\* The average cost per case is calculated by dividing the cost of prosecution and hearings by the number of cases heard in that fiscal year.

\*\*The average cost per disciplinary case is calculated by adding cost of investigations, experts, prosecution and hearings, divided by the number of cases closed in that fiscal year.

### Cost Recovery Efforts

Pursuant to the provisions of Business and Professions Code section 125.3, all boards in the Department of Consumer Affairs have cost recovery authority. The Board will request cost recovery in all accusations. In one case that resulted in an accusation, the board did request and was granted cost recovery. There is currently one case pending with potential for cost recovery.

<b>COST RECOVERY DATA</b>	<b>FY 1995/96</b>	<b>FY 1996/97</b>	<b>FY 1997/98</b>	<b>FY 1998/99</b>
Enforcement Expenditures	\$93,858	\$10,125	\$12,076	\$33,785
Potential Cases for Recovery*				
Cases Recovery Ordered	1	0	0	0
<b>Amount Collected</b>		\$1,000	\$1,000	\$1,000

\*The "Potential Cases for Recovery" are those cases in which disciplinary action has been taken based on a violation, or violations, of the License Practice Act.

## **RESTITUTION PROVIDED TO CONSUMERS**

The Board currently does not have a written restitution policy as part of its guidelines. However, the Board's enforcement staff would consider allowing the licensee to redo work in a manner that meets the intent and letter of the contract between the client and the licensee as an appropriate settlement in a disciplinary matter.

## **COMPLAINT DISCLOSURE POLICY**

### **Introduction**

The Board of Registration for Geologists and Geophysicists' complaint disclosure policy was developed to provide the public with information regarding complaints and disciplinary actions against licensed Registered Geologists, licensed Registered Geophysicists and unlicensed individuals.

### **Information To Be Released**

Upon request, the Board provides information regarding actionable complaints resulting in non-disciplinary action closed within the preceding three years.

Upon request, the Board provides information regarding **all** closed actionable complaints resulting in disciplinary action.

The Board provides information regarding all accusations/statements of issues once the accusation/statement of issues is served.

### **Closed Actionable Complaints**

Closed actionable complaints are defined as complaints that the Board has (1) investigated, (2) determined that there was a violation of the laws regulating the practice of geology or geophysics and (3) taken non-disciplinary action (warning letter/cease and desist/mediation) or (4) taken disciplinary action (citation and/or fine, accusation, statement of issues).

The Board will disclose **only** the following information regarding closed actionable complaints:

- Person complaint is against
- License number (if licensed)
- Number of complaints
- Nature of the complaint
- Action taken
- Result(s) of action
- Date of Closure

### **Open Complaints**

The Board discloses information regarding open complaints only if an accusation or statement of issues has been filed and served.

Enforcement staff makes the following disclosure statement:

**“The Board has (number) complaint(s) open against this individual. The matter(s) has been forwarded to the Attorney General’s Office and an accusation/statement of issues has been served. There are no confirmed violations of the Geologist and Geophysicist Act. A copy of the accusation/statement of issues is available by submitting a written request to the Board.”**

Staff does not provide any additional information.

## **CONSUMER OUTREACH AND EDUCATION**

Twenty-seven public meetings of the Board and its committees were held in Fiscal Year 98/99. Every meeting was in compliance with the Bagley-Keene Open Meeting Act (Act). In addition, all agendas for the public meetings were distributed and posted on the board's website in advance of the ten-day noticing requirement.

The Board published two newsletters and four information bulletins that were mailed to licensees and the Board's mailing list of consumers and academia, and posted on its website.

The Executive Officer gave presentations about the Board and its programs to the following:

**Association of Engineering Geologists, Sacramento Chapter**  
**ASBOG (Association of State Boards of Geology)**  
**California Board of Forestry**  
**California Department of Toxic Substances Control**  
**California State University, Los Angeles, Department of Geology**  
**Regional Water Quality Control Board**  
**San Diego State University, Department of Geology**

## PART 2.

### Board of Registration for Geologists and Geophysicists

#### BOARD'S RESPONSE TO IDENTIFIED ISSUES AND RECOMMENDATIONS FROM PRIOR 1996/97 REVIEW

This Report responds to three issues – or questions – raised by the Joint Legislative Sunset Review Committee.

Each issue is followed by the Board's response that includes the issue background and the Board's action.

#### ISSUE 1

*Should the Board continue as a separate entity, be merged with another board, or sunsetted and its role taken over by the Department of Consumer Affairs?*

#### ISSUE 2

*What changes can be made to the current regulatory program to improve its overall effectiveness and efficiency so that it may operate more in the public interest?*

#### BOARD RESPONSE

---

The Board was reduced from eight to seven members and has more clearly defined its operations and goals. In August 1997, the Board published a "Board Member Guidelines and Procedures Manual" that covers standards of conduct, including Board member practices at Board and committee meetings; member access to individual records; member contact with license candidates, licensees, complainants and respondents; gifts from candidates; access to examinations; and travel authorization requirements. The Board has promulgated regulations that describe and make specific those things for which it has statutory authority and reference. (Exhibit A).

The Board adopted a Strategic Plan (Exhibit B) that identifies shortening the duration from application to issuance of a license as its first objective. The plan lists a seven-point definitive action plan to achieve this objective, including discrete time frames for specific evaluation and notification actions. Examination frequency had already been increased from once to twice a year, and the Board is evaluating the feasibility of implementing on-demand testing at sites throughout the state to improve access to the examination.

The Board initiated an evaluation of continuing professional development or continuing education. The Board is not authorized by statute to require continuing education, and DCA declined to support legislation to adopt continuing education. The Board is not funded to invoke and monitor such an endeavor. The Board, however, was able to adopt remedial education requirements within its disciplinary guidelines.

Grandfathering of geologists and geophysicists was deleted entirely from the Geologist and Geophysicist Act (Act) in 1984. The initial grandfathering period was two years and ended on December 31, 1969. As a consequence, almost all grandfathered geologists and geophysicists are sixty years of age or older. The rate of retirement for grandfathered licensees has been about 5% per year and is increasing. For example, the number of licenses that expired and cannot be renewed in 1998 was 890.

The number of new licensees is expected to rise significantly after implementation of the national examination in California and in combination with comity with other states. Increases are also expected because of the Board's amendments to its regulations changing the pass points for examinations from 70% to a criterion-referenced pass point (Exhibit A).

Most complaints filed with the Board involve unlicensed persons operating illegally. In the past, the Board did not have an effective means to discipline unlicensed activities. With the adoption of citation and fine regulations, the Board can now discipline unlicensed practice as well as illegal activities of licenses.

In addition, the Board also instituted an extensive outreach program to educate the public about the requirements to use licensed geologists and geophysicists.

The Board is actively using its citation and fine regulations in its disciplinary actions. The Board issued seven citations and fine penalties since the establishment of the regulations. The Board also added staff to conduct enforcement activities.

## **BOARD ACTIONS**

The Board took the following actions on recommendations made by the JLSRC during the previous sunset review.

### ***Reconstitute the Board***

The Board was reduced from eight members to seven members. Membership now consists of four public members, two licensed geologists and one licensed geophysicist.

### ***Proactive File Review***

The Board established a procedure for the review of public files at cities, counties and state agencies where geologic reports are filed to determine whether violations have occurred.

The Board added an enforcement manager as additional staff through a Budget Change Proposal. The enforcement manager is a Registered Geologist who conducts an educational outreach program to inform the public and governmental agencies of the Board's enforcement activities and also is prepared to review reports of licensees in the files of agencies. The outreach program is so successful that activities of the enforcement manager and enforcement staff are directed toward complaints entirely. At present, more

than 75 cases are active, all from complaints. If complaint activity diminishes, the enforcement officer can conduct reviews of public files of licensee reports at State and local agencies.

***Adoption of  
Standards of  
Practice***

The Board promulgated regulations that establish Standards of Practice for Registered Geologists and Registered Geophysicists, Certified Engineering Geologists and Certified Hydrogeologists. The Standards of Practice are intended to identify ethical practices for these professions. (Exhibit A)

***Adoption of  
Standards of  
Negligence***

The Office of Administrative Law approved the Board's regulations amending the criteria for disciplinary actions on May 18, 1999 (Exhibit A).

***Strategic  
Planning***

The Board published a Strategic Plan. The planning process undertaken by the Board included a self-assessment, new organizational emphasis on enforcement and the use of quality management practices. The Board keeps the planning process current by revising and updating its Strategic Plan annually.

***Revisit  
Experience  
Requirement***

Twenty-six states license geologists; five states license geophysicists (Exhibit C). California requires five years of experience for an applicant who holds a bachelor's degree in geology or geophysics, as compared to the average of 5.2 years of experience required by the 26 states that license geologists. For an applicant with two or more years of acceptable graduate school or teaching at the university level, the experience requirement is reduced to three years. In order to allow licensing of an individual without a bachelor's degree in geology, the Board allows an applicant into the examination who has seven years of experience along with a minimum education. However, this option has been used very rarely.

***Consider Use of  
the National  
Examination***

Passage of Senate Bill 1984 mandated the use of a national examination. The Board will be using this examination process for the first time in March 2000 by administering the National Association of State Boards of Geology (ASBOG) examination. For the Spring 1999 examinations, the California pass rate before appeals was 41.1%; and the ASBOG pass rate was 59.5%.

***Require Agency  
Assistance in  
Compliance***

The Board does not have the statutory authority to Require government agencies having oversight of geological or geophysical reports and information to submit complaints concerning substandard reports by licensees or to submit the actual report that may contain false or misleading information. Although the Board cannot require such actions on the part of government agencies, the Board is educating agencies regarding the need for such action that has resulted in voluntary complaints and substandard reports being submitted to the Board.

***Increase  
Enforcement  
Funding***

The Board hired a full-time enforcement manager (Registered Geologist), and dedicated another staff person to the enforcement program. Additionally, Board expenditures with DCA's Division of Investigation in support of investigations and enforcement increased.

***Better Use of  
Cost Recovery  
Authority***

The Board adopted a policy regarding cost recovery. The policy requires the Executive Officer to request cost recovery for investigation and other costs for complaints resulting in disciplinary action.

***Define Licensed  
Professions More  
Clearly***

The Board is proposing new legislation to modernize the Act. The Board's revision includes for the first time sections defining the practices of geology and geophysics and the specialties of engineering geology and hydrogeology (see Exhibit D).

***Resolve  
Differences with  
Others***

The Board established ongoing and beneficial discussions with the Professional Soil Scientists Association of California, the American Institute of Hydrology, the California Licensed Foresters Association and the American Society of Civil Engineers. The purpose of these discussions is to ensure that the responsibilities of the parties to practice in their respective disciplines and areas of competence are clearly understood and to make specific each one's working relationships.

Successful discussions occurred with the Registered Professional Foresters where a joint training course is being developed to assist foresters to recognize when they need to bring in a licensed geologist on their projects because the timber harvest rules require geologic information in the forester's timber harvest plans.

**ISSUE 3**

*Should the State continue with the licensing and regulation of geologists and geophysicists and, if not, should some other alternative form of regulation be recommended?*

**BOARD  
RESPONSE**

Geologists and geophysicists make professional judgments that have major consequences impacting the economy of California and the health, safety and welfare of the public. While it is difficult to document the beneficial consequences in a quantifiable manner, it is clear that a potential for public harm exists if the practices of geology and geophysics were performed by ignorant, inexperienced, poorly trained or unskilled persons. Consider the words of Dr. Robert B. Olshansky, author of the FEMA 313 Manual and Associate Professor of Urban and Regional Planning at the University of Illinois at Urbana-Champaign:

*“Geology is a difficult field, because it is difficult to measure success. Instead of controlled experiments, [geologists] must depend on natural experiments that last for thousands of years. So, unlike other sciences, it is difficult to have replicability. Thus,*

*informed judgment of field relationships becomes quite important. And because the earth is not a manufactured product, field relationships are often not clear. Unfortunately, all of this imprecision opens the door for incompetent, undereducated, muddled thinkers to come up with half-baked hypotheses and present them as being equally valid as those hypotheses that are based on many lines of evidence and many highly-trained people. I fear the result if licensing is thrown out. Those who passed the test are more likely to know what they are doing. It would be a terrible mistake to throw out all these years of carefully nurturing trained and tested geologists [and geophysicists].”*

Professional judgments made by geologists and geophysicists require a high degree of skill and knowledge that are, for the most part, independent of oversight or supervision by another person. Geologists and geophysicists work with professionals from other disciplines, some of whom are licensed and some of whom are not. The work performed by geologists and geophysicists is unique and provides valuable information to the project. Invariably, other professionals, the public and regulatory agencies rely on the judgment and recommendations made by licensed geologists and geophysicists.

To be minimally competent, a geologist or geophysicist must have a generally accepted basic core knowledge, skill and ability in order to practice safely in the public interest. Knowledge can be tested. Enforcement provides a mechanism for removing licensed practitioners who demonstrate that they do not have the skill and ability required for the public to be protected. Education alerts the public to the need for licensure. Exhibit E details the benefits of the geophysics licensing program.

No state has deregulated either of these professions once a license act was enacted. There is considerable evidence that public harm occurs in the absence of established professional standards of enforcement.

Many consumers of geologic services are businesses with sophisticated requirements for those services, although some consulting geologists work almost exclusively for private parties. Governmental agencies rely upon the license process to determine which individuals are qualified to provide geologic services. These organizational entities also rely on licensure to indicate competency. A public survey of persons who complained to the Board received a substantial response and showed considerable interest in the Board's activities, in the continuance of licensure and in the provision of regulatory controls over the licensed professions (Exhibit F).

The evaluation of incompetence requires review by an expert in the same area of practice to determine the normal practice for investigation and reporting used by competent geologists or geophysicists to perform similar tasks. An aggressive review of the standard of practice (commonly called standard of care) is required for these enforcement cases. It is critical to the public welfare that an effective mechanism exists to determine the qualifications of those practicing geology and geophysics. Although other public agencies provide some oversight of the kinds of services provided by geologists and geophysicists, there is none that provides licensure as a means of identifying and controlling competent practitioners. Those agencies, charged with protection of water supplies, prevention of landslides, prohibiting construction on active faults and many other public safety responsibilities, rely upon the Board to identify competent geologists and geophysicists. Finally, no substantial savings to the consumer, public agencies or businesses would result from the elimination of licensing. For a more detailed economic impact of the profession on the citizenry, please see Exhibit G.

The Board provides a high degree of public protection through the use of licensing, enforcement, outreach and enhancement of its regulatory programs. The Board agrees with the JLSRC report that the Board should . . . **be continued as a separate agency . . . and that . . . the State should continue with the licensing and regulation of the practices of geology and geophysics.**

## **PART 3.**

# **Board Of Registration For Geologists And Geophysicists**

## **BACKGROUND PAPER FOR 1999 PUBLIC HEARING**

### **Identified Issues, Background Concerning Issues, Staff Recommendations, and Questions for the Board**

**PRIOR SUNSET REVIEW:** The Board of Registration for Geologists and Geophysicists (BRGG) was last reviewed by the Joint Legislative Sunset Review Committee (JLSRC) four (4) years ago (1995-96). The JLSRC and the Administration identified a number of issues and problem areas concerning this Board. For example, the JLSRC noted that BRGG had never adopted any code of ethics for the profession, had a very low pass rate on its state-only examination for geologists, and because it is a state required examination, there was no comity or reciprocity for out-of-state geologists or geophysicists. The JLSRC also noted that the Board's existing seven-year experience requirement is somewhat excessive and arbitrary when compared with other states, and does not seem necessary to assure that geologists and geophysicists are competent.

In addition, the JLSRC made several findings with regard to the operation of the Board. For example, the JLSRC found that: (1) the Board has been lax in using its authority to investigate violations of its licensing act; (2) it defines the practice of geology too broadly; (3) it has not been involved in any strategic planning efforts to improve its overall effectiveness and efficiency; (4) it spends a very low percentage of its budget on enforcement activity; there were undue delays in the licensing and application process; (5) there are very few complaints and enforcement actions taken by this Board against licensees; (6) there were substantial delays in completing investigations; (7) the board had not been involved in any inspections or audits of geologic reports. The JLSRC reached the conclusion that components of the current regulatory program do not appear to provide protections to the consumer and preclude consumer harm.

Despite these findings, the JLSRC recommended to continue the BRGG, but for the Board to implement a number of recommendations and changes. Some of these included: (1) that it review geologic reports periodically to assure they are not substandard, or contain false or misleading information; (2) adopt standards of practice for the profession; (3) initiate strategic planning and quality management practices; (4) provide for a more appropriate experience requirement; (5) determine if the current state-only examination could be replaced with the current national examination; and, (6) more clearly define the practice of geology so it does not restrict other areas of practice which may be somewhat related to the practice of geology.

The legislature passed SB 1077 (Greene) (Chapter 1137, Statutes of 1996), which extended the Board's sunset date to July 1, 2001.

The JLSRC also reviewed whether licensing and regulation of geologists and geophysicists should continue and found that: (1) there was some evidence that the unregulated practice of geology and geophysics could harm the consumer, but only indirectly because the consumer is generally not the direct client of the licensee, and that those seeking services of geologists or geophysicists are rather sophisticated consumers (e.g., public/state agencies); (2) there does not appear to be any significant public demand for the regulation and licensing of geologists and geophysicists, and there are those within the profession who have opposed licensure and consider it unnecessary; (3) only about 18 states actually license geologists and only 3 other states regulate geophysicists; and, (4) there may be other alternatives to state licensure such as private professional certification. Despite these findings, the JLSRC recommended to continue with the licensing and regulation of the practice of geology and geophysics.

In September, 1999 the BRGG submitted its required sunset report to the JLSRC. In this report, information of which is provided in Member's binders, the Board described actions they have taken since the Board's prior review. The Board addressed several issues presented during its last review. It also implemented the following changes pursuant to recommendations of the JLSRC: (1) It established a procedure to review public files at local/state agencies where geologic reports are filed to determine whether violations have occurred. (2) Adopted standards of practice for the profession. (3) Undertook a strategic planning process and set specific goals and objectives and performance standards. (4) Adopted the National Examination and eliminated the state-only examination. (5) Increased enforcement funding. (6) Established discussions with similarly related professions to ensure that areas of practice are clearly understood.

The following are unresolved issues pertaining to this Board, or areas of concern for the JLSRC, along with background information concerning the particular issue. Where necessary, the staff of the JLSRC has made preliminary recommendations for Members and the Department of Consumer Affairs to consider. There are also questions that staff has prepared concerning the particular issue. The Board was provided with these questions and should address each one.

## **CURRENT SUNSET REVIEW ISSUES:**

### **ISSUE #1. SHOULD THE LICENSING AND REGULATION OF GEOLOGISTS AND GEOPHYSICISTS BE CONTINUED?**

**BACKGROUND:** Although this issue was addressed by the JLSRC four years ago, it is a requirement of the sunset law that the Committee continue to evaluate whether licensure is necessary, and whether conditions may have changed such that licensure of this profession is no longer necessary.

The BRGG has provided to the JLSRC an analysis of the need to continue with the licensing of both geologists and geophysicists, and the continued title act disciplines of "Engineering

Geologists” and “Hydrogeologists.” However, the findings and conclusions reached by the JLSRC concerning the licensure of these two professions in its prior review have not changed. The BRGG should provide justification to the Committee why these two professions should still be licensed and regulated, and why title disciplines should be continued.

**QUESTION #1 FOR THE BOARD:** *What evidence is there that the unregulated practice of geology and geophysics could have major financial, health, safety or other significant consequences for the consumer? (i.e., Who actually benefits or could be harmed by the work of geologists and geophysicists? How many individual consumers actually come to the Board with complaints that are actually handled by the Board and not referred, or satisfactorily addressed in other ways? How many result in disciplinary action and of what type?) Why wouldn't private certification of geologists suffice? Why should California continue to provide title protection to “Engineering Geologists” and “Hydrogeologists.” Why wouldn't private certification of these disciplines suffice?*

## **ISSUE #2. IS A NEW DEFINITION OF THE PRACTICE OF GEOLOGY AND GEOPHYSICS NECESSARY SO AS TO DETERMINE LICENSED VERSUS UNLICENSED ACTIVITY?**

**BACKGROUND:** The Board indicated during its prior review in 1995, that they do not have a mechanism to efficiently identify unlicensed practice, and that a change in the license renewal process is under consideration which may assist the board to determine unlicensed practice in an efficient manner. The JLSRC recommended that the BRGG pursue efforts to more clearly define the practice of geology and geophysics so as to determine licensed versus unlicensed activity.

The BRGG is proposing, and has submitted for review to the JLSRC, new legislation to modernize the Act. The Board's revisions include for the first time sections defining the practices of geology and geophysics and all specialty title acts including engineering geology and hydrogeology.

Although clarification of the practice of geology and geophysics was recommended by JLSRC, it is unclear what impact these new definitions may have on professional practice that may be related to geology, both licensed and unlicensed (e.g., engineering, soil science, hydrology, etc.).

**STAFF RECOMMENDATION:** *The Board should further evaluate the impact of its proposed legislative proposal to revise the Geologist and Geophysicist Act, and evaluate what impact this proposal may have on other closely related professions.*

**QUESTION #2 FOR THE BOARD:** *Please explain what impact the Board's revision of the Geologist and Geophysicist Act will have on the practice of geology, geophysics, and on the specialty classifications including engineering geology and hydrogeology. Is the Board inadvertently creating practice acts (and restrictions) by defining the specialty areas of engineering geology and hydrogeology? Have other closely related professions evaluated this proposal?*

### **ISSUE #3. IT IS UNCLEAR WHY GEOLOGISTS ARE INVOLVED IN THE PRACTICE OF STAMPING REAL ESTATE DISCLOSURE DOCUMENTS.**

**BACKGROUND:** It has been brought to the attention of the JLSRC that geologists are involved in the stamping of real estate disclosure documents. It is not clear why geologists are involved in this practice, and what role the Board will have in assuring that there are no misrepresentations or fraudulent assurances made by geologists within these documents.

**QUESTION #3 FOR THE BOARD:** *Why are geologists involved in the stamping of real estate documents? What is the Board doing to protect consumers when geologists engage in the practice of stamping real estate disclosure documents?*

### **ISSUE #4. SHOULD THE SEVEN-YEAR EXPERIENCE REQUIREMENT FOR GEOLOGISTS AND GEOPHYSICISTS BE CHANGED?**

**BACKGROUND:** The experience requirement for licensing a geologist is seven years, with two years of experience credited for a bachelor's degree, and an additional two years experience credited for graduate work toward a Masters or Ph.D. The experience must be gained under the immediate supervision of a registered geologist or a registered civil engineer or a registered petroleum engineer. Work that is strictly technical in nature (that is, routine and repetitive work not requiring substantial judgment) is not considered appropriate geologic experience, and time spent in positions of that type will not be credited toward the work experience requirement. The individual supervisors must complete and send in a reference form documenting the applicant's experience in terms of: 1) the nature of the task performed, and 2) time spent at each pertinent task. The supervisors estimate the percentage of time the applicant spends in responsible charge.

During the prior review of the BRGG, the JLSRC indicated that the experience requirement appeared somewhat excessive and arbitrary, and five years additional experience beyond a bachelor's degree did not seem necessary to assure that geologists and geophysicists are competent. (Engineers are required to have four years.) That considering the amount of experience required and what amounts to appropriate "supervised" work experience, and then passage of the examination by the applicant, it could take a graduate anywhere from five to ten years to gain entry into the profession. This far exceeded any other experience requirement of other boards. The Center for Public Interest Law (CPIL) concurred with this analysis.

The Board claimed that the experience requirement is intended to provide the opportunity for the applicant to learn the practical and field aspects of geologic work under the tutelage of a well-experienced individual who is able to clarify geologic issues in the public interest for the new geologist. It recently provided information to the JLSRC indicating that 18 of the 26 states which license geologists require 5 or more years experience beyond a bachelor's degree. No other justification for the 7-year experience requirement was provided.

**QUESTION #4 FOR THE BOARD:** *Has the Board considered reducing its experience requirement or changing the process by which supervised work experience is determined? Please provide information on the number of applicants who have applied to the Board with BA's or MA's over the past four years and the number of years it has taken these applicants to obtain a license? (This information can be provided at a later date.)*

**ISSUE #5. ALTHOUGH THE BOARD HAS IMPROVED THE OVERALL OPERATION OF ITS ENFORCEMENT PROGRAM, ACTUAL DISCIPLINARY ACTION TAKEN BY THE BOARD IS ALMOST NONEXISTENT.**

**BACKGROUND:** In 1996, the Center for Public Interest Law (CPIL) argued that the enforcement program for this Board is almost nonexistent. It commented that in its 24-year history, it had received a total of 466 complaints. Of these 332 were against unlicensed practitioners (presumably filed by BRGG licenses). This left only 134 complaints lodged against licenses. During this 24-year period, the Board revoked two licenses; two others were surrendered.

For the past four years, the BRGG has received on average about 27 complaints per year, a larger percentage coming from other licensees, and only filed one disciplinary action in FY 1995/96, in which that person received probation with suspension.

Although the Board does get a small amount of complaints per year, it indicated that it hired a full-time enforcement manager who is a registered geologist, and has dedicated another staff person to the program. Additionally, their expenditures for investigation of cases and enforcement increased. Part of the responsibility of this new enforcement manager will be to review geologic reports periodically to assure they are not substandard, or contain false or misleading information.

**QUESTION #5 FOR THE BOARD:** *What new enforcement policies, practices and capabilities has the Board developed within its enforcement program, and are any other changes necessary? Is the Board's enforcement program still impeded by any budgetary, resource or staffing constraints? Is the Board involved in any random inspections or audits of state or local geologic reports? How many are done on an annual basis?*

## **ISSUE #6. SHOULD THE BOARD BE CONTINUED, OR ITS RESPONSIBILITIES TRANSFERRED TO THE DEPARTMENT OF CONSUMER AFFAIRS AND AN ADVISORY COMMITTEE ESTABLISHED?**

**BACKGROUND:** During the prior review, the Center for Public Interest Law recommended that this Board be abolished and that a bureau within the Department be created, or a merged geologist/engineer bureau within the Department of Consumer Affairs (DCA) be considered. It quoted a 1978 report from DCA, which stated that, “although the potential for geological damage is undoubtedly serious and requires that caution and regulation be exercised, the Geology Board’s role in monitoring California’s geological problems is marginal. . .The Geology Board has virtually no enforcement program, and obviously, in a geologically active state like California, other, more potent regulatory processes are at work to protect the public. . .Given that the Board’s enforcement function is virtually non-existent, and given that the licensing examination is of dubious value and is unproven as a source of public protection, and given that alternative sources of certification exist, we recommend that the Board be abolished.” It should be recognized that this Board has made vast improvements since its last review, and addressed and implemented almost all of the prior issues and recommendations raised by the JLSRC. It worked cooperatively with the JLSRC to implement some of these changes.

If a determination is to be made, it should be based on whether the state needs to regulate geologists or geophysicists, and whether there would be some efficiency gained by transferring authority of this Board to the Department.

Certain states have found efficiencies in combining related licensing disciplines within a single board or under a centralized agency. Examples include combining the related professions of engineers, geologists and architects. This is especially true when there may be disagreements over conflicting areas of practice. Both BRGG and the Board of Professional Engineers and Land Surveyors have attempted to resolve some of these “gray areas,” but as earlier indicated in the background paper for the Engineer’s Board, neither board has been able to reach agreement on what may be appropriate activities or tasks for each profession.

The Board should indicate why a bureau within the Department, with an advisory committee made up of geologists, geophysicists, engineers and land surveyors, would not be more effective in regulating and resolving problems associated with these professions, since the need for consumer protection appears minimal.

**STAFF RECOMMENDATION:** *No recommendation at this time.*

**QUESTION #6 FOR THE BOARD:** *Why should this Board be continued? Summarize what changes have been made to the current regulatory program since its last review to improve its overall effectiveness and efficiency so that it may operate more in the public interest. Why couldn’t this Board and the Board of Professional Engineers and Land Surveyors be combined as a bureau under the Department of Consumer Affairs, with an advisory committee to the Department, to administer this licensing program more effectively and efficiently than the current Board?*

## PART 4.

### Board of Registration for Geologists and Geophysicists

#### BOARD'S RESPONSE TO ISSUES AND RECOMMENDATIONS FROM 1999/2000 SUNSET REVIEW

##### SHOULD THE LICENSING AND REGULATION OF GEOLOGISTS AND GEOPHYSICISTS BE CONTINUED?

**What evidence is there that the unregulated practice of geology and geophysics could have major financial, health, safety or other significant consequences for the consumer? (i.e., Who actually benefits or could be harmed by the work of geologists and geophysicists?)**

*Prior to 1967, geologic registration did not exist. Housing tracts were developed without the benefit of regulated and licensed geologists. Many of these tracts were built on hillsides. In 1962, southern California experienced a regional geologic disaster due to rainfall-induced landslides that impacted hillside development. The landslides resulted in unacceptable financial losses that eventually led to the adoption of professional licensure for geologists in California.*

*The process of licensure began following the 1962 landslides and resulted in an amendment to the City of Los Angeles grading ordinance that required geologic reports for hillside development. Other Southern California cities and counties followed with their own ordinances. Each agency developed its own ordinances and qualifications for geologists, but they were not consistent with one another. A need was recognized to establish both uniform statewide standards and a mechanism for statewide licensure. The uniform licensure standards would not only provide for the mobility of the professional geologists, but the public would directly benefit from increased competition among the geologists.*

*The City and County of Los Angeles, along with cities and counties of Ventura and Orange Counties worked toward a statewide geologist regulation bill in 1967. In 1968, with the support of the American Association of Petroleum Geologists and its Pacific Section, The American Institute of Professional Geologists, the San Joaquin Geological Society and the Association of Engineering Geologists, a license act was passed. Statewide licensure that followed implementation of the 1968 California geologists registration act provided a qualified pool of geologists throughout the state to meet the growing demand for engineering geologic services as stronger grading ordinances became more widespread. The circumstances surrounding the original development of the licensing act illustrates the need for statewide licensing of geologists.*

In the last decade, the State of California experienced eight major earthquakes injuring 94,623 people, killing 130 people and causing nearly \$27 billion in physical damage. The documented loss due to landslides between 1992 and 1995 is nearly \$2 billion with 29 deaths. During 1996, fifty-seven of California's fifty-eight counties were designated disaster areas by both the state and federal governments because of geological hazards. The El Niño storms of the 1997-98 winter season caused 17 deaths and over \$550 million in property losses.

The graph in Figure 1 clearly shows the increased risk to the population of California due to the consistent frequency of high Magnitude earthquakes.

As California continues to solve the housing challenge presented to it by this continued increase in population, the need to develop on seismically stable land is critical for the health and safety of its burgeoning population. Registered Geologists and Registered Geophysicists play a critical role in mitigating the impacts on the public from geologic hazards.

The harm from improperly constructed dams, roads, bridges, and construction activities that cause landslides and improperly identified earthquake hazards is well established. The public is impacted in major ways including injuries, deaths, disruption of lives, destruction of property and consumption of tax dollars. With sound geologic input, appropriate review by public agencies and implementation of the geologic recommendations during construction, much of this damage and loss can be avoided. The need for public protection through licensing and regulation of geologists and geophysicists is also well established in work involving environmental concerns and ground water resources, including contamination of ground water supplies by leaking underground storage tanks, land application of industrial waste, leaking landfills and salt-water intrusion due to ground water withdrawal.

**How many individual consumers actually come to the Board with complaints that are actually handled by the Board and not referred or satisfactorily addressed in other ways?**

Individual consumers such as homeowners, small business owners and concerned citizens are responsible for submitting almost all of the approximately 125 complaints the Board has received over the past 4.5 years. 120 of these complaints have been received in the last 18 months. In November 1999, the Board had 49 open cases (up from three open cases eighteen months ago.) Approximately one-third of these complaints are about unlicensed activity, with the other two-thirds being against licensees. The Board hired a Registered Geologist as the Enforcement Manager since the last Sunset Hearing.

*The Board is the top arbiter of complaints, however, since consumers and the professions are aware of the existence of the Board, there is an understanding that enforcement activity is always the "next step." The Board could be considered the first step in an informal discipline process, similar to arbitration. The existence of the Board allows consumers to know "if I'm not satisfied, I can go to the Board." Enforcement is the Board's top priority.*

### **How many result in disciplinary action and what type?**

*Almost all legitimate complaints result in some form of disciplinary action, ranging from mediation, warning letters, cite and fine, or license revocation (including cost recovery). Results of the cases cited earlier have included issuance of nine citations and fines, several cease and desist letters, letters of warning and mediation between the parties. One of the purposes of the enforcement staff is to determine whether or not a complaint received by the Board is within its jurisdiction and whether or not the complaint has merit. A technical expert and/or the Department of Consumer Affairs Division of Investigation must review the cases.*

### **Why wouldn't private certification of geologists and geophysicists suffice?**

The unregulated practice of geology and geophysics could have major financial, health, safety or significant consequences for consumers. Private certification of geologists and geophysicists would not necessarily better serve the public, since protecting public health and safety is not private industry's primary concern. However, it is the responsibility of public agencies to ensure public health and safety.

Private certification would not provide significant enforcement, by the only means available to a private entity, which is decertification and removal from the membership. There is no mechanism for resolution of the harm done and no penalties are imposed. Separating the certification agency from the parent organization is intended to reduce any fear that the public may have that certification standards are being manipulated by the professional association for the economic benefit of its members. Though geologic and geophysical peer review technically makes a great deal of sense; professionals are understandably reticent to discipline colleagues with whom they must maintain a daily working relationship. When peers are also competitors, there is the risk that peer discipline might be a cover for anti-competitive conduct. When professionals are empowered to discipline members of other professions, there is the potential of peer review masking interprofessional rivalries. Deputizing peer reviewers as government officials does not necessarily overcome these problems.

The Board receives complaints from individual homeowners concerning geologic reports prepared for the consumer after slope failures occurred. The objective of the abbreviated investigations and preparation of the geologic reports is to determine the cause of the failures and address mitigation measures. In some instances, the requests are made immediately after a severe storm event, as was experienced in many parts of California during El Niño winters. The demand for rapid evaluation can be high over short periods of time if damage is extensive in an area. Attachment A describes some of the inquiries received by the Board from individual consumers and how Board staff assisted them.

## **IS A NEW DEFINITION OF THE PRACTICE OF GEOLOGY AND GEOPHYSICS NECESSARY SO AS TO DETERMINE LICENSED VERSUS UNLICENSED ACTIVITY?**

**Please explain what impact the Board's revision of the Geologist and Geophysicist Act will have on the practice of geology, geophysics and on the specialty classifications including engineering geology and hydrogeology.**

The revisions to the Geologist and Geophysicist Act will refine the definitions of the practices of geology and geophysics. This refinement will help the Board determine the lines between licensed and unlicensed activity for enforcement purposes. The issue of licensed and unlicensed activity is well defined in the revised Act.

The Board has directed Legal Counsel to perform a legal review of the revised Act to make certain that there is no unintended broadening of the practices regulated by the Board.

**Is the Board inadvertently creating practice acts (and restrictions) by defining the specialty areas of engineering geology and hydrogeology?**

Clearly, the specialties of engineering geology and hydrogeology have the greatest potential for public harm because of the nature of the projects completed by practitioners in these specialty areas. For example, engineering geologists work on projects such as dams, highways and roads and hydrogeologists complete geologic investigations to understand, evaluate and remediate groundwater contamination. In these two fields, additional knowledge, skill and experience are necessary to reach appropriate conclusions and to communicate those conclusions to developers, the public and agency officials.

*The provisions of the Geologist and Geophysicist Act establishing the protected titles of Certified Engineering Geologist and Certified Hydrogeologist place no restrictions on the work that geologists can provide to the public. A licensee must be licensed as a Registered Geologist before obtaining a specialty license and is not prohibited from practicing in the areas of engineering geology or hydrogeology if the work is within his or her area of expertise. However, the additional experience required to earn a specialty license and the required examination ensure additional protection of the health, welfare and economic interest of consumers.*

**Have other closely related professionals evaluated this proposal?**

*The Board held public hearings in Northern and Southern California to obtain input on its revised Geologists and Geophysicists Act. Among the related professional groups who have commented on the revised Act are the Registered Professional Foresters, Professional Soil Scientists of California, California Council of Geoscience Organizations, Board of Professional Engineers and Land Surveyors, the Pacific Section of the American Association of Petroleum Geologists and the Association of Engineering Geologists. All of these professionals have interacted with the Board through the public participation process. Currently, the revised Act undergoing review by the Office of Legal Affairs within the Department of Consumer Affairs.*

## **IT IS UNCLEAR WHY GEOLOGISTS ARE INVOLVED IN THE PRACTICE OF STAMPING REAL ESTATE DISCLOSURE DOCUMENTS.**

### **Why are geologists involved in the stamping of real estate disclosure documents?**

*Registered Geologists are one of the professionals identified in real estate disclosure law with the technical expertise required to prepare real estate disclosure documents. AB 248 (Torlakson), which became law on January 1, 2000, specifically authorizes geologists to prepare real estate disclosure documents (California Government Code section 1103.4(c)).*

### **What is the Board doing to protect consumers when geologists engage in the practice of stamping real estate disclosure documents?**

The Board and its Technical Advisory Committee held several public forums in 1999 to address the issue of the role of Registered Geologists in preparing real estate disclosure reports. The Board received an opinion on this issue from the Department of Consumer Affairs' Legal Office that was promptly distributed to all interested parties and posted on the Board's Website. This opinion states that there is no legal prohibition against licensed Registered Geologists stamping real estate disclosure documents and that in some cases, a Registered Geologist may be the most qualified professional to make certain disclosures in situations where the disclosure relates to information not solely based on public maps.

The Board accepts complaints from consumers involving the licensed and unlicensed practice of geology relating to real estate disclosure documents. The Board is committed to ensuring that consumers are not misled by the inappropriate placement of a Registered Geologist's stamp on a real estate disclosure document, and maintains that a Registered Geologist's seal should be accompanied by notice that the placement of the seal is relevant and significant as it relates to the practice of geology. Further, the Board, through the Registration Act and complaint process, protects the public against completion of geologic work in real estate disclosure documents by unlicensed practitioners. The specific facts of each complaint concerning allegations of deceit, fraud or misrepresentation relating to a real estate disclosure document are evaluated on a case-by-case basis to determine if grounds exist for disciplinary action.

## **SHOULD THE SEVEN-YEAR EXPERIENCE REQUIREMENT FOR GEOLOGISTS AND GEOPHYSICISTS BE CHANGED?**

### **Has the Board considered reducing its experience requirements or changing the process by which supervised work experience is determined?**

*Since the last Sunset Hearing, the Board has received no applications for admittance into its examinations claiming the seven-year experience with no college degree requirement. At the Board's regularly scheduled meeting on February 4-5, 2000, the Board will consider rescinding the seven-year experience requirement for admittance into the Registered Geologist licensing examination.*

*The current and previous Boards have felt that having a licensed Registered Geologist admittance requirement of seven years of experience only for individuals who do not have a degree in geology allows the Board to include individuals who may be competent to practice geology but who do not have a degree in geology.*

**Please provide information on the number of applicants who have applied to the Board with BA's and MA's over the past four years and the number of years it has taken these applicants to obtain a license.**

*The number of individuals who have applied to the Board for a Registered Geologist license in the past four years is 2136. Of these, 2029 were admitted to the examination. The actual number taking the examination was 1725 candidates. The following table illustrates the number of examinees taking the licensing examination and the corresponding passing rate.*

<i><b>Year</b></i>	<i><b>No. Taking</b></i>	<i><b>Pass Rate %</b></i>
<i>1996</i>	<i>512</i>	<i>27</i>
<i>1997</i>	<i>417</i>	<i>30</i>
<i>1998</i>	<i>357</i>	<i>19</i>
<i>1999</i>	<i>439</i>	<i>40</i>

*Fifty-two percent of all candidates for the Registered Geologist licensing examination have a Master's or Doctorate degree. Forty-eight percent of all candidates have only a Bachelor's degree. The number of years it has taken for each of these applicants to obtain a license has not been researched for this report. Approximately 30% of the examinees pass the examination on the first try. Some individuals have taken the licensing examination more than ten times without success.*

*The number of individuals who have applied to the Board for a Registered Geophysicist license in the past four years is 27. Of these 24 were admitted to the examination. The total number of candidates taking the examination was 24. The attendance and passing rates are displayed in the following table:*

**YEAR # TAKING PASS RATE %**

<i><b>Year</b></i>	<i><b>No. Taking</b></i>	<i><b>Pass Rate %</b></i>
<i>1996</i>	<i>10</i>	<i>50</i>
<i>1997</i>	<i>6</i>	<i>83</i>
<i>1998</i>	<i>4</i>	<i>75</i>
<i>1999</i>	<i>4</i>	<i>100</i>

*Half of the individuals for the Registered Geophysicist licensing examination have a Master's or Doctorate degree, with the other half having only a Bachelor's degree. The time that it takes to obtain a Registered Geophysicist license is less than for a Registered Geologist, apparently because of the higher overall passing rates for the Registered Geophysicist examination.*

**ALTHOUGH THE BOARD HAS IMPROVED THE OVERALL OPERATION OF ITS ENFORCEMENT PROGRAM, ACTUAL DISCIPLINARY ACTION TAKEN BY THE BOARD IS ALMOST NONEXISTENT.**

**What new enforcement policies, practices and capabilities has the Board developed within its enforcement program, and are any other changes necessary?**

The Board's number one priority since the last Sunset Review is strengthening its enforcement program. The Board hired a full-time Associate Engineering Geologist as the Enforcement Manager. The Enforcement Manager is a licensed Registered Geologist and Certified Engineering Geologist who reviews the cases and incoming complaints. The Enforcement Manager also performs investigative work that requires technical expertise for evaluation, conducts site visits, reviews records at local agencies for specific cases, interviews respondents in conjunction with the Division of Investigation to evaluate the technical issues, provides technical input to the Deputy Attorneys General and visits agencies to provide outreach on the Board's enforcement program (including San Diego County Environmental Health Department, California Division of Mines and Geology, San Diego Office of the Attorney General Licensing Section and State Water Resources Control Board Clean Water Program).

Cases forwarded to the Division of Investigation more than tripled in the last year. The enforcement staff developed a good working relationship with the Division of Investigation including providing technical input on cases so the investigators can obtain pertinent and critical information in a timely and cost effective manner. The enforcement staff also increased the technical expert base to include experts from various specialties such as fault investigations, seismic hazards including landslide and liquefaction evaluation, groundwater contamination evaluation, water resource evaluation, geophysical investigations and mineral evaluation.

In addition, the Board established an Enforcement Oversight Committee in 1998 to review closed cases and assist in identifying trends in enforcement activities. The Board also implemented its cite and fine authority that was established in 1995 and issued nine citations and collected fines from several individuals for negligence and unlicensed practice. In the cases of more severe offenses or repeat offenders, cases are submitted to the Attorney General for disciplinary action or the local District Attorney for filing criminal charges. The Board publishes a summary of closed enforcement cases in the biannual newsletter and posts the information on the Board's website. The Board has a policy of issuing press releases in the areas where enforcement cases are settled to better alert the public.

*The Board has also adopted Disciplinary Guidelines and a Code of Professional Standards (Code of Ethics) through the regulatory process to assist Enforcement staff in processing complaints from the public.*

**Is the Board's enforcement program still impeded by any budgetary, resource or staffing constraints?**

*The caseload in the enforcement program continues to increase. The Board submitted a Budget Change Proposal for an additional Associate Engineering Geologist to handle the increasing workload. The Department of Consumer Affairs approved the request, but the Department of Finance denied it. Another request will be submitted this year.*

**Is the Board involved in any random inspections or audits of state or local geologic reports?**

*The Board began inspections of state and local agencies after the last Sunset Hearing, however, the Board quickly discovered that the caseload of enforcement cases resulting from consumer complaints was dominating the enforcement staff's time. The Board has committed to improving its relationship with state and county agencies and by following up on media reports and when issues are presented to the Board, the information is disseminated. Public Officials have submitted complaints to the Board that have been pursued by the enforcement staff.*

**How many are done on an annual basis?**

*None are done on an annual basis. Rather, they are performed as a response to media inquiries, Board direction, or as a follow-up to a consumer complaint.*

**SHOULD THE BOARD BE CONTINUED, OR ITS RESPONSIBILITIES TRANSFERRED TO THE DEPARTMENT OF CONSUMER AFFAIRS AND AN ADVISORY COMMITTEE ESTABLISHED?**

**Why should this Board be continued?**

With almost \$30 billion in damages and the loss of dozens of lives caused by geologic hazards, it is imperative to maintain a Board that oversees the examination of competent professionals and the enforcement of the practice of geology and geophysics. The Board should be continued because it protects the individual consumer's interest in the areas of public health and safety by effectively managing the licensure and regulation of Registered Geologists and Registered Geophysicists. This is similar to the opinion reached by the Joint Legislative Sunset Review Committee during the first Sunset process four years ago.

**Summarize what changes have been made to the current regulatory program since its last review to improve its overall effectiveness and efficiency so that it may operate more in the public interest.**

The Board has made significant improvements in its regulatory program in the areas of application and license processing, complaint processing, complaint resolution, conduct of

investigations, and complaint information dissemination to complainants. Please refer to the following list of topics:

### ***Application and License Processing***

The Board met its 1998 Strategic Plan update goals to:

- notify 75% of the applicants of their eligibility to take an examination within 41 days of completion of the application package.
- notify 100% of the applicants of written examination results within 100 days of the completion of the application package.

The Board notified applicants of their results of the September 1999 examinations within 52 days.

### ***Enforcement***

The Board shares consumers' concerns regarding the effectiveness of the enforcement program. The enforcement program is the Board's number one priority. Since the last Sunset Review, the Board:

- hired a full-time Enforcement Manager
- adopted strong policies to implement the internal enforcement process.
- adopted policies and procedures that will enable Board staff to better inform complainants about the status of cases without jeopardizing confidentiality requirements.
- created an Enforcement Oversight Committee to review closed cases to assist in identifying trends in enforcement activities or situations where enforcement procedures might be improved.
- exercised its citation and fine authority and doubled its enforcement staff.
- dramatically increased its use of the Division of Investigation and other avenues available to it in gathering enforcement information.
- published new materials and created a website to better inform the public about the complaint process.

**Why couldn't this Board and the Board of Professional Engineers and Land Surveyors be combined as a bureau under the Department of Consumer Affairs with an advisory committee to the Department, to administer the licensing program more effectively and efficiently than the current Board?**

Since the last Sunset Hearing the Board has focussed on improving its own processes, and has not considered a merger with the Engineer's Board. The Board of Registration for Geologists and Geophysicists has an excellent working relationship with the Engineer's Board, and will continue to work with them on issues of mutual concern.

As a separate Board with 5% of the registrants of the Board of Professional Engineers and Land Surveyors (6,000 versus 90,000) we issued twice the number of enforcement orders. This Board took the advice of the first Sunset Committee's report and made appropriate internal changes and initiated personnel changes that focussed Board staff on the Board's top priority, which was, and is, enforcement.

If the Board became a Bureau within the Department of Consumer Affairs, there would no longer be an independent policy board. Only 5% of the Board's current budget covers Board and Committee members' expenses and per diem. The Board currently utilizes extensive volunteer help in preparing and grading its examinations, reviewing enforcement cases and providing policy support. Even though some nominal expenses are paid to the volunteers, the bulk of the work is performed on a pro bono basis. If the Board were changed to a Bureau, then these volunteer services would have to be paid for by increased numbers of civil servants or by contracting out to consultants. This "in-kind" type of assistance would no longer be available and a proposed Bureau would have to hire civil service staff to complete the Board's statutory mandate.

## PART 5.

### Board of Registration for Geologists and Geophysicists

#### FINAL RECOMMENDATIONS OF THE JOINT LEGISLATIVE SUNSET REVIEW COMMITTEE AND THE DEPARTMENT OF CONSUMER AFFAIRS

**The Following Recommendations were Adopted by the Joint Legislative Sunset Review Committee on April 11, 2000 by a Vote of 5 to 0:**

**ISSUE #1.** (CONTINUE REGULATION OF THE PROFESSION?) Should the licensing and regulation of geologists and geophysicists by the Board be continued?

**Recommendation #1:** *The Joint Committee and the Department recommends that the State should continue with the licensing and regulation of geologists and geophysicists.*

**Comments:** Geologists and geophysicists make professional judgments that have major consequences impacting the economy of California and the health, safety, and welfare of the public. Hired primarily by public agencies to investigate potential geological hazards, possible contamination of groundwater sites, and the reconstruction of roads, geologists provide a highly skilled service. For the most part, geologists and geophysicists operate independent of oversight. For these reasons and because of the high earthquake risk in the state, the Joint Committee and Department recommends that the state continue regulating these professions.

**ISSUE #2.** (CONTINUE WITH THE BOARD?) Should the Board be continued, or its role be limited to an advisory body and the remaining functions be transferred to the Department?

**Recommendation #2:** *The Joint Committee and the Department recommends that the Board be retained as the agency responsible for regulating the geology and geophysics professions.*

**Comments:** The Department recommends retaining the Board as the agency responsible for regulating the geology and geophysics professions. The board structure has proven effective for ensuring consumer and industry input into the regulatory process. There appears to be no compelling reason to change the regulatory structure for these professions.

**ISSUE #3. (DEVELOP REGULATIONS ON THE USE OF THE GEOLOGIST STAMP?) Should Geologists be allowed to use their official stamp on real estate disclosure documents?**

**Recommendation #3:** *The Joint Committee and the Department recommends that the Board adopt regulations to define and clarify the use of the geologist registration stamp, and to expressly prohibit its use on real estate disclosure documents unless a geologic evaluation has been done.*

**Comments:** Registered Geologists are one of the professionals identified in real estate disclosure law with the technical expertise required to prepare real estate disclosure documents. AB 248 (Torlakson), which became law on January 1, 2000, specifically authorizes geologists to prepare real estate disclosure documents (California Government Code section 1103.4(c)). Although the Geologist may sign such documents, there is concern that placement of the Registered Geologist's stamp on real estate disclosure documents, specifically the Natural Hazard Disclosure Statements (NHDS), may mislead consumers into believing that they have received a complete geologic report (or opinion) regarding property, rather than just a sign-off on whether property is located within a zone for natural hazards.

The Board agrees, and has taken steps to advise their licensees that the use of the Registered Geologist seal on the NHDS document is an unacceptable practice. The Department had indicated that regulations should be adopted to define and clarify the use of the geologist registration stamp, and to expressly prohibit its use on real estate disclosure documents unless a geologic evaluation has been done.

**ISSUE #4. (NEW DEFINITION OF THE PRACTICE NECESSARY?) Is a new definition of the practice of geology and geophysics necessary to more clearly define licensed versus unlicensed activity?**

**Recommendation #4:** *The Board should submit to the Joint Committee for review any proposed changes to the practice of geology and geophysics. The Department's Office of Legal Affairs should review the revised definitions to assure that there is no unintended broadening of the practices regulated by the Board.*

**Comments:** The Board indicated during its prior review in 1995, that they do not have a mechanism to efficiently identify unlicensed practice, and that a change in the license renewal process is under consideration which may assist the board to determine unlicensed practice in an efficient manner. The Joint Committee recommended that the Board pursue efforts to more clearly define the practice of geology and geophysics so as to determine licensed versus unlicensed activity.

The Board is proposing, and has submitted for review to the Joint Committee, new legislation to modernize the Act. The Board's revisions include for the first time sections defining the practices of geology and geophysics and all specialty title acts including engineering geology and hydrogeology.

Although clarification of the practice of geology and geophysics was recommended by the Joint Committee, it is unclear what impact these new definitions may have on professional practice that may be related to geology, both licensed and unlicensed (e.g., engineering, soil science, hydrology, etc.). The Board has similar concerns and has submitted these new practice definitions to the Office of Legal Affairs within the Department for review to insure there is no unintended broadening of the practices.

**ISSUE #5. (CONTINUE WITH THE SEVEN-YEAR EXPERIENCE REQUIREMENT?) The seven-year experience requirement, which includes a combination of education and supervised work experience, does not appear justified.**

***Recommendation #5: The Joint Committee recommends that the Board should consider reducing the experience requirement for geologists and geophysicists.***

**Comments:** The experience requirement for licensing a geologist is seven years, with two years of experience credited for a bachelor's degree, and an additional two years experience credited for graduate work toward a Masters or Ph.D. During the prior review of the Board, the Joint Committee indicated that the experience requirement appeared somewhat excessive and arbitrary, and five years additional experience beyond a bachelor's degree seems to require more than just the minimum competence necessary to practice in this profession. (Engineers are required to have only two years of supervised experience if they receive a bachelor's degree in engineering and only one year of supervised experience if they have a Masters or Ph.D. in engineering.) Considering the amount of experience required, and what amounts to appropriate "supervised" work experience, and then passage of a difficult examination by the applicant (with an average passage rate of 30%), it could take a graduate anywhere from five to ten years to gain entry into the profession. This far exceeds any other experience requirement of other boards. [The Center for Public Interest Law (CPIL) concurs with this analysis.]

**ISSUE #6. (NEED FOR OTHER CHANGES TO BOARD'S ENFORCEMENT PROGRAM?) The Board has developed new policies, practices and capabilities to improve the overall operation of its enforcement program. However, other changes may still be necessary?**

***Recommendation #6: The Joint Committee recommends that the Board should continue with the efforts it is has been making to improve the overall operation of its enforcement program. The Board should pursue its budget change proposal for an additional Associate Engineering Geologist to handle the increasing workload within its enforcement program, and to perform random inspections or audits of state or local geologic reports, especially in areas that are more susceptible to natural geologic disasters.***

**Comments:** The Board's number one priority since the last sunset review has been strengthening its enforcement program. The Board hired a full-time Associate Engineering Geologist as the Enforcement Manager. The Enforcement Manager is a licensed Registered

Geologist and Certified Engineering Geologist who reviews the cases and incoming complaints. Cases forwarded to the Division of Investigation more than tripled in the last year. Enforcement staff have developed a good working relationship with the Division of and also increased the technical expert base to include experts from various specialties such as fault investigations, seismic hazards including landslide and liquefaction evaluation, groundwater contamination evaluation, water resource evaluation, geophysical investigations and mineral evaluation. In addition, the Board established an Enforcement Oversight Committee in 1998, to review closed cases and assist in identifying trends in enforcement activities. The Board also implemented its cite and fine authority. The Board has also adopted Disciplinary Guidelines and a Code of Professional standards (Code of Ethics) through the regulatory process to assist Enforcement staff in processing complaints from the public. Since the caseload in the enforcement program continues to increase, the Board has requested an additional Associate Engineering Geologist to handle the increasing workload.